REMARKS

The Examiner's acceptance of the drawings filed October 25, 1999 is acknowledged.

Claims 1-20 stand rejected under 35 USC §103(a) as being unpatentable over US patent 6,530,054 to Hollander ("Hollander") in view of US patent 6,120,549 to Goslin et al. ("Goslin"). The rejection is respectfully traversed because the rejection fails to show that all the limitations are shown or suggested in the references, and the alleged motivation for combining Goslin with Hollander is improper. Therefore, *prima facie* obviousness is not established.

Claim 1 includes limitations that relate to randomly generating a set of parameter values for a parameterizable logic core, generating a netlist from the logic core and randomly generated parameter values, and simulating a circuit using the netlist. The rejection fails to show that these limitations are suggested by either Hollander or Goslin.

The cited sections of Hollander disclose parameter-driven test generation in which a program is written to generate test vectors (col. 2, ll. 54-61). It appears that the parameters are provided as input to the test program, which in response may direct a random generator to create large numbers of test packets for testing a communications device or send new stimuli to the simulator only after the occurrence of particular events (col. 2, l. 62 - col. 3, l. 7). Hollander further describes a test generator that can be constrained to generate tests for specific subsets of the design's functionality (col. 5, ll. 1-9). Hollander also suggests translating into Verilog a subset of a temporal language along with verification scripts, and verifying assertions by a formal verification engine (col. 13, ll. 19-31). Generally, Hollander suggests parameter-driven generation of test vectors, along with a random generator for generating test packets. Hollander does not appear to suggest randomly generating parameter values for the test program, much less random parameters for a parameterizable logic core.

Furthermore, there is no apparent suggestion of generating a netlist from randomly generated parameter values as alleged in the rejection.

The rejection acknowledges that Hollander does not disclose parameterizing logic cores, but alleges that Goslin teaches parameterized logic cores "in order to provide a performance requirement of the design and meet design simulation with minimum simulation time[.]" However, while Goslin suggests parameterized logic cores, there is no suggestion that testing of the parameterized logic cores may be done by random generation of the parameters, nor does the rejection allege any particular portions of Goslin that suggest testing of the parameterized logic cores with different parameter values. Therefore, the rejection fails to establish that all the limitations of the claims are suggested by the combination of references.

The rejection alleges that it would have been "obvious to combine Goslin [sic] teaching of parameterized logic functional block or module in the design into [sic] Hollander for the circuit design under testing [sic] or simulation to minimize design verification time." This alleged motivation is improper because it is conclusory. Addressing the "rigorous … requirement for a showing of the teaching or motivation to combine prior art references," the Court of Appeals for the Federal Circuit has stated:

> We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, (citations omitted), although "the suggestion more often comes from the teachings of the pertinent references," *Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. *See, e.g., C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." *In re Dembiczak*, 175 F.3d 994, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999).

The alleged motivation is merely a broad conclusory statement of an objective of Goslin, and no evidence has been provided that suggests how Hollander would or could be modified, nor has evidence been provided that suggests Hollander would benefit from such modification. Therefore, the alleged motivation is insufficient to support *prima facie* obviousness.

Claim 2 includes limitations that relate to generating a random parameter value within predetermined upper and lower limits, and generating a new random parameter value if the random parameter value fails to meet predetermined criteria. The cited sections of Goslin teach displaying value ranges for parameters of a selected module (col. 6, ll. 51-62) and a module broker determining whether a suitable module exists based on user-input specific parameter values (col. 7, l. 52 - col. 8, l. 10). These teachings of Goslin appear in no discernable way to suggest the claim limitations. Therefore, the rejection fails to establish a *prima facie* case of obviousness for claim 2. If the rejection is maintained, further explanation is respectfully requested.

Claim 3 includes limitations that relate to assigning respective probabilities to numbers between upper and lower limits for the parameters and generating the random parameter value as a function of the probabilities. The rejection alleges that these limitations are suggested by Goslin at col.9, l. 20 - col. 10, l. 14. However, this section of Goslin suggests attaching weights to parameters for purposes of a module broker selecting between multiple modules that may satisfy user-input parameter values (col. 9, ll. 4-19). There is no apparent indication that Goslin generates random parameter values between the upper and lower limits as claimed. Therefore, the rejection fails to establish a *prima facie* case of obviousness for claim 3. If the rejection is maintained, further explanation is respectfully requested.

Claim 4 includes limitations that relate to providing a parameter value as input to a GUI and generating random replacement values for invalid values detected by the GUI. The

rejection cites various sections of Goslin as suggesting these limitations. However, these sections merely indicate that a user may enter parameters and select modules via a GUI. There is no apparent suggestion of providing the randomly generated parameter values as input to a GUI and generating replacement values when the GUI detects invalid values. Therefore, the rejection fails to establish a *prima facie* case of obviousness for claim 4. If the rejection is maintained, further explanation is respectfully requested.

Claim 5 includes limitations that relate to providing the randomly generated set of parameter values to a GUI and identifying invalid parameter values with the GUI. Goslin's cols. 6-8 were cited as suggesting these limitations. However, there is no apparent suggestion of inputting the randomly generated parameter values to the GUI, nor of identifying invalid values with the GUI. If specific elements of Goslin are being construed as suggesting these limitations, a detailed explanation is respectfully requested. Otherwise, the rejection fails to establish a *prima facie* case of obviousness for claim 5.

Claim 6 depends from claim 5 and includes limitations that relate to generating replacement parameters values for invalid values. The rejection cites Goslin's col. 8, ll. 15-60) as suggesting these limitations. However, this section appears to discuss representation of spaces of possible parameter values (col. 8, l. 15) and choosing a module according to an area of a parameter space of the module (col. 8, ll. 40-46). There is no apparent suggestion of generating replacement parameter values. If there are specific elements of Goslin being construed as suggesting these limitations, a detailed explanation is respectfully requested. Otherwise, the rejection fails to establish a *prima facie* case of obviousness for claim 6.

Claims 7 and 16 include limitations that relate to selecting a random order in which to provide parameter values to the graphical user interface and providing the parameters one-by-one as input to the graphical user interface. The rejection

cites Goslin's col. 8, ll. 15-60) as suggesting these limitations. However, as explained above in reference to claim 6, this section of Goslin appears to have no relationship to the claim limitations. If there are specific elements of Goslin being construed as suggesting these limitations, a detailed explanation is respectfully requested. Otherwise, the rejection fails to establish a *prima facie* case of obviousness for claims 7 and 16.

Claims 8-14 include limitations that relate to cloning and mutating sets of parameter values and generating netlists from the logic core and sets of parameter values. The cited sections of Goslin do not suggest these limitations. As explained above, Goslin teaches selecting a suitable module based on user-input parameter values, where there may be multiple modules with overlapping parameter spaces. These teachings do not suggest the claim limitations, and it is difficult to imagine how these teachings might be construed to suggest mutating sets of parameter values that are used in generating a netlist from a logic core. Therefore, a *prima facie* case of obviousness has not been established for claims 8-14. If the rejection is maintained, further explanation is respectfully requested.

Claim 15 depends from claim 1, and *prima facie* obviousness has not been established for at least the reasons set forth above.

Claim 17 includes limitations that relate to accumulating respective numbers of tests having been performed using different parameter values, accumulating respective numbers of tests failed using each of the parameter values, and highlighting parameters having numbers of failed tests equal to the number of tests. The rejection alleges that Goslin suggests these limitations. However, the rejection fails to identify any specific elements of Goslin as corresponding to these limitations. From the sections cited against the previous claims, Goslin appears to generally suggest simulating the parameterized modules, not the specific limitations of claim 17. Therefore, a *prima facie* case of obviousness has not been

established. If the rejection is maintained, further explanation is respectfully requested.

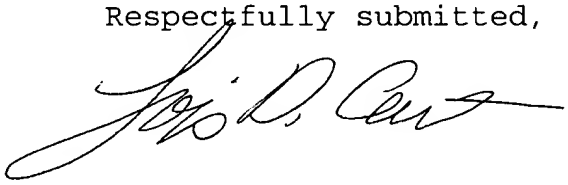
Claims 18, 19, and 20 includes limitations that are similar to the limitations of claim 1. Therefore, for at least the reasons set forth above, *prima facie* obviousness has not been established.

The Office Action fails to provide evidence of a suggestion of all the limitations of claims 1-20 and fails to provide a proper motivation for modifying the teachings of Hollander with Goslin. Therefore, a *prima facie* case of obviousness has not been established for claims 1-20, and the rejection should be withdrawn.

CONCLUSION

Reconsideration and a notice of allowance are respectfully requested in view of the Remarks presented above. If the Examiner has any questions or concerns, a telephone call to the undersigned is invited.

Respectfully submitted,



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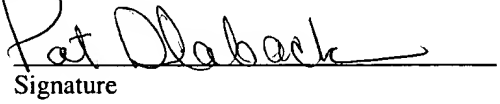
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